

DC300

Document Camera

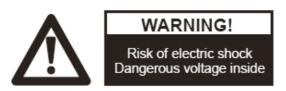


USER MANUAL

1

Please read this manual carefully before operating the document camera and keep it for reference.

PRECAUTIONS



NOTICE: PLEASE READ CAREFULLY BEFORE USE

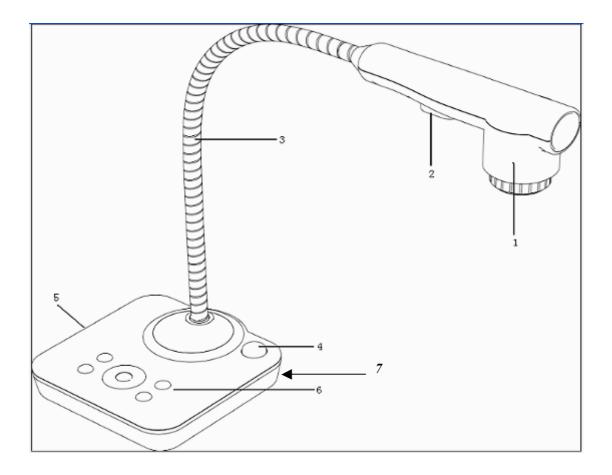
- Use the document camera under the rated electric conditions.
- Do not place the document camera on an unstable surface as it may fall, causing injury or damage.
- Do not place this device directly under sunlight or near heaters.
- Do not place this device near water.
- Keep the camera away from acid or alkali gas.
- Do not place this document camera in humid, dusty or windy environments.
- The recommended operating environment is:

Temperature: 0°C - 45°C (32°F-113°F) Humidity: less than 75%

- Always unplug BEFORE cleaning the device. Use a damp soft cloth for cleaning. Do not use volatile solvent.
- Immediately unplug and call for professional assistance if equipment functions abnormally.
- Unplug the document camera when not in use.

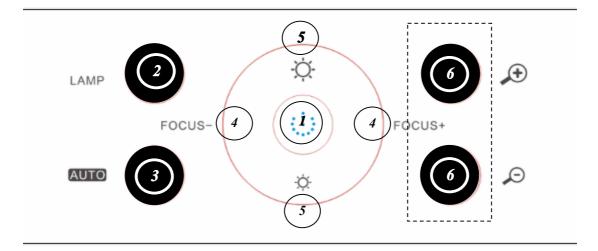
USER MANUAL	1
1. PARTS IDENTIFICATION	4
2. CONTROL PANEL	5
3. INPUTS AND OUTPUTS	5
4. REMOTE CONTROL	6
5. CONNECTIONS	7
5.1. COMPUTER CONNECTION 5.2. VGA OUTPUT CONNECTION	
6. COMMUNICATE WITH COMPUTER	9
6.1 COMPUTER REQUIREMENTS 6.2 USB CAMERA	
7. FEATURES	15
LIGHT ZOOM IN AND ZOOM OUT FOCUS ADJUSTMENT BRIGHTNESS ADJUSTMENT WHITE BALANCE ADJUSTMENT TEXT/PICTURE MODE IMAGE FREEZE IMAGE MIRROR SPLIT SCREEN IMAGE SAVE IMAGE RECALL USB 2.0 PORT USB IMAGE CAPTURE AND VIDEO RECORDING	15 15 15 15 16 16 16 16 16 16 16 16 16 17
8. SPECIFICATION	18
9. TROUBLE-SHOOTING	19
10. PACKING LIST	26

1. PARTS IDENTIFICATION



- 1. Camera
- 2. LED Light
- 3. Flexible Camera Arm
- 4. IR Receiver for Remote Control
- 5. Interface Panel (VGA Port, Power Input and USB)
- 6. Control Panel
- 7. Kensington Lock

2. CONTROL PANEL



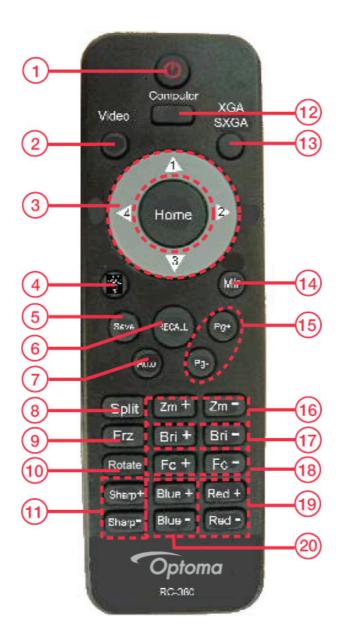
- 1. **POWER**: Turn on/off the power.
- 2. LAMP: Turn on/off the LED light.
- 3. AUTO: Perform auto focus, color adjustment and white balance.
- 4. FOCUS+/-: Adjust focus manually.
- 5. **BRIGHT+/-**: Image brightness control.
- 6. **ZOOM+/-**: Control image zoom in and zoom out.

3. INPUTS AND OUTPUTS



- 1. DC 12V: Power input.
- 2. VGA OUT: VGA (RGB) signal output (15 pin D-SUB).
- 3. **USB**: Capture image from connected computer with provided software.

3. **REMOTE CONTROL**



- 1. Power: Power document camera on and off
- 2. Video: Video mode
- 3. Home/Directional Key: Home button
- 4. Lamp: Turn LED light On/Off
- 5. Save: Capture the image in display
- 6. Recall: Image recall mode enabled, display the saved images
- 7. Auto: Perform auto focus, color adjustment and white balance
- 8. Split: Split screen enables the comparison between the frozen image and live image
- 9. Freeze: Freeze/unfreeze the image

- 10. Rotate: Rotate image
- 11. **Sharp+/-**: Image sharpness control
- 12. Computer: Computer mode
- 13. SXGA/XGA: Switch the output signal between XGA and SXGA
- 14. Mirror: Output right-and-left, up-and-down mirror image
- 15. Page +/-: Saved image page up and down when image recall mode is enabled
- 16. **Zoom+/-**: Image zoom in and zoom out control
- 17. **Bright+/-**: Image brightness control
- 18. Focus+/-: Adjust focus manually
- 19. **Red+/-**: Image chroma control (red)
- 20. **Blue+/-**: Image chroma control (blue)

5. CONNECTIONS

5.1. COMPUTER CONNECTION



5.2. VGA OUTPUT CONNECTION



6. COMMUNICATING WITH COMPUTER

6.1 COMPUTER REQUIREMENTS

Minimum PC and software requirements:

Operating system: Windows XP

CPU: Pentium 4 1.8GHz

Physical memory: 512M

Video memory: 64M

6.2 USB FUNCTION

SOFTWARE INSTALLATION

Click "Next" when dialogue box appears to run the software installation package:



Read the terms, select "I accept the terms in the license agreement" and click "Next" as shown below:

To add your own license text to this dialog, specify your license agreement file in the Dialog editor. 1. Navigate to the User Interface view. 2. Select the LicenseAgreement dialog. 3. Choose to edit the dialog layout . 4. Once in the Dialog editor, select the Memo ScrollableText control. 5. Set FileName to the name of your license agreement RTF file. After you build your release, your license text will be displayed in the License Agreement dialog. O I go not accept the terms in the license agreement	License Agreement Please read the following license	agreement carefully.		
 Select the LicenseAgreement dialog. Choose to edit the dialog layout. Once in the Dialog editor, select the Memo ScrollableText control. Set FileName to the name of your license agreement RTF file. After you build your release, your license text will be displayed in the License Agreement dialog. I accept the terms in the license agreement		dialog, specify your license a	greement file in the Dialog	,
	 Select the LicenseAgreemen Choose to edit the dialog layo Once in the Dialog editor, select Set FileName to the name of y 	nt dialog, put, t the Memo ScrollableText c vour license agreement RTF f	ile.	ialog.
			Prin	nt

When the following dialogue box appears, click "Next":

Customer Information	4
Please enter your information.	
User Name:	
lenovo	
Organization:	
Install this application for:	
Install this application for: <u>Anyone who uses this computer (all users)</u>	
• Anyone who uses this computer (all users)	

The default installation directory is Program Files, C: \ Program Files \. Click "Next" to proceed with default installation directory or click "Change" to select a different installation directory:

🛃 Visual	izer - InstallShield Viza	rd 🛛
	on Folder kt to install to this folder, or click Change t	o install to a different folder.
	Install Visualizer to: C:\Program Files\	
InstallShield -	< <u>B</u> a	ck Next > Cancel

After selecting destination folder, click "OK".

hange Current Destinatio Browse to the destination fol		
Look in:		
🦲 Program Files		🖌 🖻 🖻
Adobe Adobe Dreamweaver CS3 FileZilla FTP Client Inno Setup 5 Kingsoft	Microsoft Office MySQL-Front NSIS PPT检测软件 SMART Technologies SogouInput	Super Rabbit TechVision Tencent VbsEdit+v3[1][1].3.1.8 Visualizer WaninSMServer
[<] ·····		>
Eolder name:		
D:\Program Files\ aliShield		

Then click "Next".

Destinat	ion Folder	
Click Ne	xt to install to this folder, or click Change to in	nstall to a different folder.
	Install Visualizer to:	
	D:\Program Files\	hange
staliShield		

Click "Install" to complete installation.

If you want to review or change any of your inst exit the wizard. Current Settings: Setup Type:	illation settings, cli	ick Back, Click Cancel to
Setup Type:		
Typical		
Destination Folder:		
D:\Program Files\		
User Information:		
Name: lenovo		
Company:		
) alishield		

Click "Finish" to complete the installation.



Then you will see the following dialogue box, which is an installation package for 2005 C++ environment.

If your PC already has this installed, click "No" to exit. Otherwise, click "Yes" to install it.

Please read the following license agreement. Press the PAGE DOWN key to see the rest of the agreement.
MICROSOFT SOFTWARE LICENSE TERMS MICROSOFT VISUAL C++ 2005 RUNTIME LIBRARIES These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft * updates, * supplements, * Internet-based services, and * support services for this software, unless other terms accompany those items. If so, those terms apply. By using the software, you accept these terms. If you do not accept
Do you accept all of the terms of the preceding License Agreement? If you choose No, Install will close. To install you must accept this agreement.

STARTING SOFTWARE

Double click the short cut icon



on the desktop to launch the software.

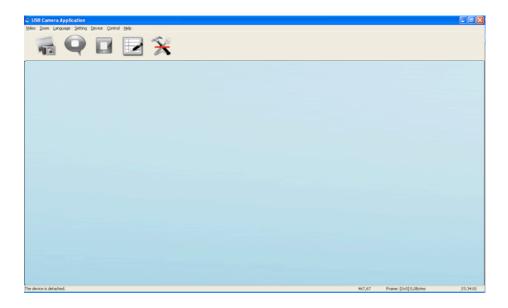
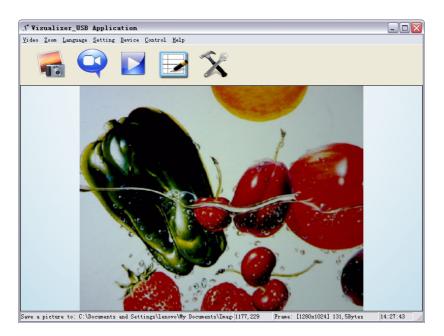


IMAGE CAPTURE AND VIDEO RECORDING



Left click to capture images. The captured images will be automatically saved into the default destination folder. The path and file name are displayed in software status bar on the bottom of the window as shown below:



Left click to start recording. While recording, the settings button will be inactive. Detailed information is displayed on the software status bar at the bottom of the window. The video is automatically saved in the default folder or pre-set folder.

SETTINGS

The captured images and recorded videos will be saved automatically into the Images and Videos folders.

To set a different path for the Image/Video to be saved, click icon on the left side of the window and a pop up dialog box will appear as below:

Capture and record setting	
Select a folder to save picture files: C:\Documents and Settings\lenovo\My Documents	
Select a folder to save video files: C:\Documents and Settings\lenovo\My Documents	
Audio input (optional): None	
Audio compressors (optional): PCM	
The length of video that can be recorded: 00H:11M:445	
Smooth	

Save captured images into a different folder

Click the button next to the "select a folder to save picture files" text box to set the path for captured images.

Save recorded video into a different folder and set up parameters for videos

Click the button next to the "Select a folder to save video files" text box to set the path for videos.

You can also change the video settings. The Audio input (optional) drop down box offers

the options of recording video with or without sound as shown below:

Audio input (optional):	None	
	None	
	Realtek HD Audio Input	
Audio compressors (optional):	PCM	

"The length of video that can be recorded" box displays the longest recording time for videos to be saved in the preset path as shown below:

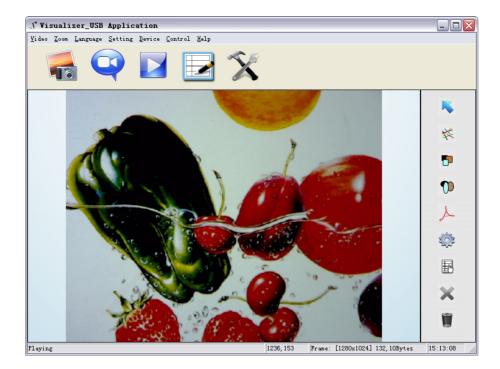
The length of video that can be recorded: 00H:11M:355

icon.

Click "save" to complete setting.

IMAGE MODIFICATIONS

To begin image modifications, click



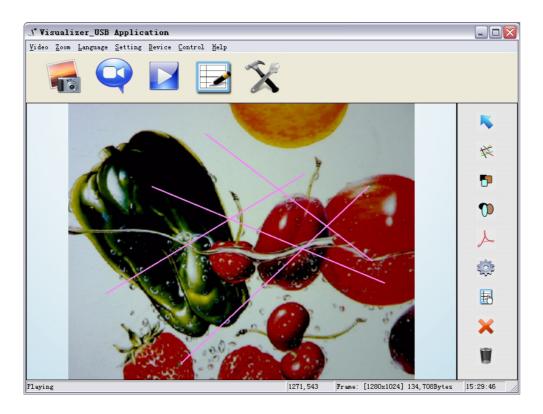
Select Graphic and Move

icon allows you to select and move lines, circles, etc to a different position within the image.

Line

Clicking

icon allows you to create lines within the image.





icon allows you to change the setting of the chosen line.

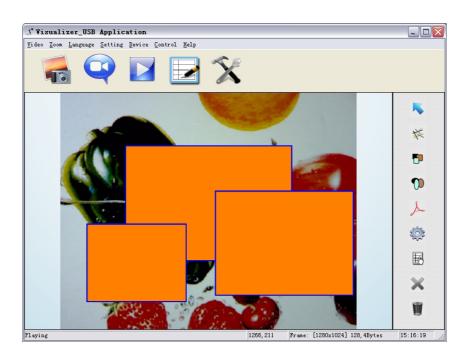
J Visualizer_USB Applica	tion		
<u>V</u> ideo Zoom Language Setting	Device Control Help		
e	🔽 🛃 🍏		
			*
		/ >	*
	\searrow		7
G	raphic property	X	0
	Type: Line	Color:	X
	Line Width:	Fill Color:	\$
	X: • 193	Width: 392	B
1	Y: + 685	Height: + 582	×
X		×	Ŵ
Playing		1230, 820 Frame: [1280x1024] 135, 771Byt	es 15:34:34

Line Width: Change the width of the line. X, Y: Change the position of the line. Color: Change the color of the line. Width, Height: Change the angle of the line.

Rectangles

5

icon allows you to place a rectangle in the image as shown below.





icon allows you to change the setting of the chosen rectangle.

J Visualizer_USB Applica	tion		
Video Zoom Language Setting	Device Control Help		
	🔽 🛃 🕉	⊊ ►	
2			菜
			5
G	raphic property		0
	Type: Rectangle	Color:	X
	Line Width: 5	Fill Color:	
	X: • 92	Width: 479	Ð
	Y: + 499	Height: 408	×
X		×	Ŵ
Playing		1252,868 [Frame: [1280x1024] 134,988By	tes 15:33:11

Line Width: Change the line width of the rectangle.

X, Y: Change the position of the rectangle.

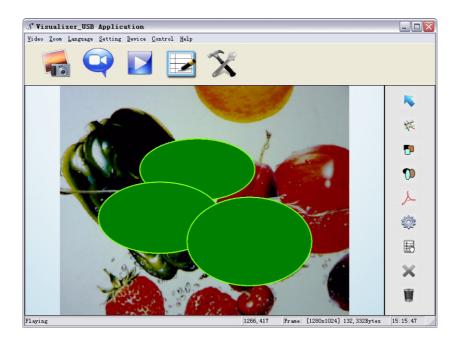
Color: Change the line color of the rectangle.

Fill Color: Check box to fill color in the rectangle.

Width, Height: Change the shape of the rectangle by changing the angle of two adjacent lines of the rectangle.

Circular Shapes

icon allows you to place circular shapes in the image as shown below.





icon allows you to change the setting of the chosen circle.

J Visualizer_USB Appl	ication		
⊻ideo Zoom Language Settin	ng <u>D</u> evice <u>C</u> ontrol <u>H</u> elp		
	🔽 🛃 🌶	K	
		*	*
			7
	Graphic property		0
	Type: Circle	Color:	0 人 章
	Line Width:5	Fill Color:	
	X: * 232	Width: + 610	Ð
1	Y: 529	Height: 390	×
X		×	Ŵ
Playing		1234.795 Frame: [1280x1024] 133.584Bytes	15:32:05

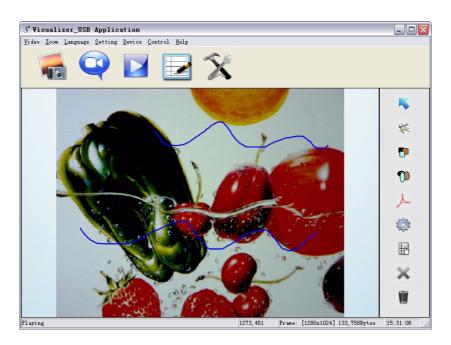
19

Line Width: Change the line width of the circle. X, Y: Change the position of the circle. Color: Change the line color of the circle. Fill Color: Check box to fill color in the circle. Width, Height: Change the size of the circle.

Freeform



icon allows you to place scribbles in the image as shown below.



题

icon allows you to change the setting of the chosen curve:

J Visualizer_USB Appli	ication		
Video Zoom Language Settir	ng Device Control Help	K	
	Graphic property	×	× * •
1 Con	Type: Curve	Color:	ل∧ \$\$
	X: • 349	Width: 720	Ð
7	y: ±703	Height:	× 11
Playing		1255,699 Frame: [1280x1024] 134,245Byte	es 15:35:31

Line Width: Change the line width of the curve. X, Y: Change the position of the curve.

Color: Change the line color of the curve.

Graphic Default Setting

icon allows you to change the default graphic setting.

Graphic Default Set	X
_ Line	
Width:	Color:
Rectangle	
Width: 5	Color:
Fill Color:	
Circle	
Width: 5	Color:
Fill Color:	
Curve	
Width: 5	Color:
	×

Deleting Graphic

Click K to delete the chosen graphic.

Delete all the graphics

Click to delete all graphics that are placed in the image.

7. FEATURES

LIGHT

DC300 is RoHS compliant, which means it meets the rigorous European Union's requirements for restriction of the use of certain hazardous substances in electrical and electronic equipment. DC300 uses eco-friendly, low-power LED's which are cool to the touch and mercury free.

ZOOM IN AND ZOOM OUT

DC300 enables you to view items in immense detail with 9x optical zoom combined with 12x seamless digital zoom. The advanced optical system of DC300 features high-speed auto focus capability that ensures quick auto focus when you zoom in and out of any object. You can also manually adjust focus to satisfy any special viewing needs by pressing "Fc +" and "Fc -".

FOCUS ADJUSTMENT

When the document camera is turned on, the focus automatically adjusts. It is not necessary to readjust the focus if you are only working with 2D materials (text, photos, etc.) Only 3D objects require a focus adjustment. Press the "AUTO" button to auto focus. Press the "Fc +" or "Fc -" button to focus manually.

BRIGHTNESS ADJUSTMENT

You can adjust the camera brightness by pressing the "Bri +" or "Bri -" button.

WHITE BALANCE ADJUSTMENT

Under different lighting conditions you may need to adjust the white balance. The "AUTO" button adjusts the white balance automatically and also assists with fine focus changes.

ROTATE MODE

Allows you to rotate images.

FREEZE IMAGE

Use "Frz" button to freeze and unfreeze the image.

MIRROR IMAGE

The "Mir" button allows you to show different perspectives of an object.

SPLIT SCREEN

The "Split" button allows you to split the screen and compare two different images or views of one object side by side.

IMAGE SAVE

The DC300 can store up to 12 images in its internal memory. You can recall stored images by pressing one of the numerical buttons on the front panel or remote control.

IMAGE RECALL

By pressing the "Recall" button, all saved images can be displayed. Using the "Pg +" or "Pg -" will allow you to toggle through the image library.

USB 2.0 VIDEO & IMAGE CAPTURE

The USB port can be used to store still images and video clips from the document camera to your computer. (Note: You will need to install the supplied software).

8. SPECIFICATION

Model	DC300
Sensor	1/3" CMOS
Pixels	2 Megapixels
Zoom	9x Optical, 12x Digital
Frame Rate	12
Shooting Area	Max: 16.5"x11.7", Min: 0.1"x0.1"
Focus	Auto/Manual
Output Resolution	XGA, SXGA
Resolution (Horizontal)	≥750 TV Lines
White Balance	Auto/Manual
Color Adjustment	Yes
Brightness Adjustment	Yes
Image Capture	Yes, 12 Images
Video Recording	Yes (via USB)
Image Mirror	Yes
Image Split	Yes
Image Freeze	Yes
Text M ode	Yes
OSD	Yes
USB 2.0	Slave × 1 (USB Camera)
Remote Control	Yes (360°Controllable)
Light Source	LED Light Box
Kensington Lock	Yes
Operating Temperature	32°F ~113°F
Dimensions	Setup: 17.7"×8.3"×19.7", Folded: 6.7"×8.3"×15.7"
Power Supply	12V DC Power Adaptor
Weight (net)	3.97lbs/1.8kg

9. TROUBLE-SHOOTING

Symptoms	Possible causes/counter-measures	
No image	1. Power cord is not properly connected.	
	2. Cables are not properly connected.	
	3. Power switch is not turned on.	
	4. The built-in fuse is broken: Change fuse.	
	5. Change the output resolution.	
Image bending	1. Camera is not in right position, adjust the camera.	
	2. Press the AUTO	
Out of focus or blurred	1. The object is too close to the lens.	
image	2. Focus is on the top point of zoom, press "Zm -".	
	3. Auto-focus is not on: Press AUTO again.	
	4. Fog on the lens in damp climate. It will disappear	
	gradually when the equipment warms up.	

If the problem still remains after checking the above, consult your dealer or authorized service center.

10. PACKING LIST

Item	Quantity
Power Cord	1
Power Adaptor (12V/2A)	1
VGA Cable	1
USB Cable (2.0)	1
Remote Control	1
User Manual (CD)	1

Contact: Optoma Technology, Inc., 3178 Laurelview Ct., Fremont, CA, Tel: 510-897-8600, For customer service please call: 1-888-887-5001 All Specifications are subject to change without notice. ©2011 Optoma Technology, Inc. All other names mentioned herein are property of their respective owners.